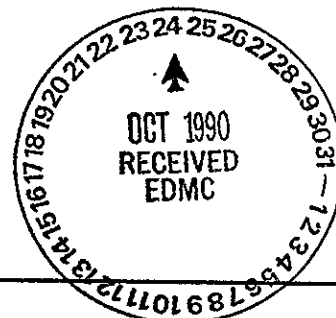


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Change Number	APPROVED DOCUMENT CHANGE CONTROL FORM Do not use blue ink. Type, or print in black	Date October 16, 1990
Document Number & Title DOE-RL 88-32, Rev. 1, "Remedial Investigation/Feasibility Study Work Plan for the 200-BP-1 Operable Unit, Hanford Site, Richland, Washington"		Date Document Last Issued March 1990
Originator M. A. Buckmaster <i>M.A. Buckmaster</i> 200-BP-1 RI Coordinator <i>10/16/90</i>		Phone 376-1792
<b>Description of Change</b> <p>Modify text to indicate wells installed in the Rattlesnake Ridge Interbed will be completed in the first water producing zone. The first water producing zone will be identified by bailing the borehole and monitoring water levels during drilling of the Elephant Mountain Basalt flow bottom and the Rattlesnake Ridge Interbed. Additionally, examination of geologic samples obtained during drilling of these stratigraphic intervals will be used as a tool to identify potential producing zones. The length of screens set in the Rattlesnake Ridge Interbed shall not exceed 15 feet but may be less depending upon the encountered stratigraphy.</p> <p>Note: Include affected page number Pg WP-155, SAP/FSP-35</p>		
<b>Justification and Impacts of Change</b> <p>The current workplan strategy for well completion dictates that the screen extend from five feet into the overlying basalt to 15 feet into the upper portion of the Rattlesnake Ridge Interbed (total screen length of 20 feet). This strategy is undesirable for the following reasons: 1) screen lengths greater than 15 feet are in direct violation of the generic well specification for deep confined wells as stipulated in WHC-S-014, Rev. 4. 2) The basalt flow bottom and uppermost section of the Rattlesnake Ridge Interbed may not represent a suitable monitoring zone if these units do not produce water.</p> <p>(continued)</p>		
<i>J. K. Erickson</i> J. K. Erickson		<u>10/17/90</u>
DOE UNIT MANAGER <i>Douglas H. Sherwood</i> D. Sherwood		DATE <u>10/18/90</u>
LEAD REGULATORY UNIT MANAGER		DATE
Per Action Plan for Implementation of the Hanford Consent Order and Compliance Agreement, Section 9.3		



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Justification and Impacts of Change Continued

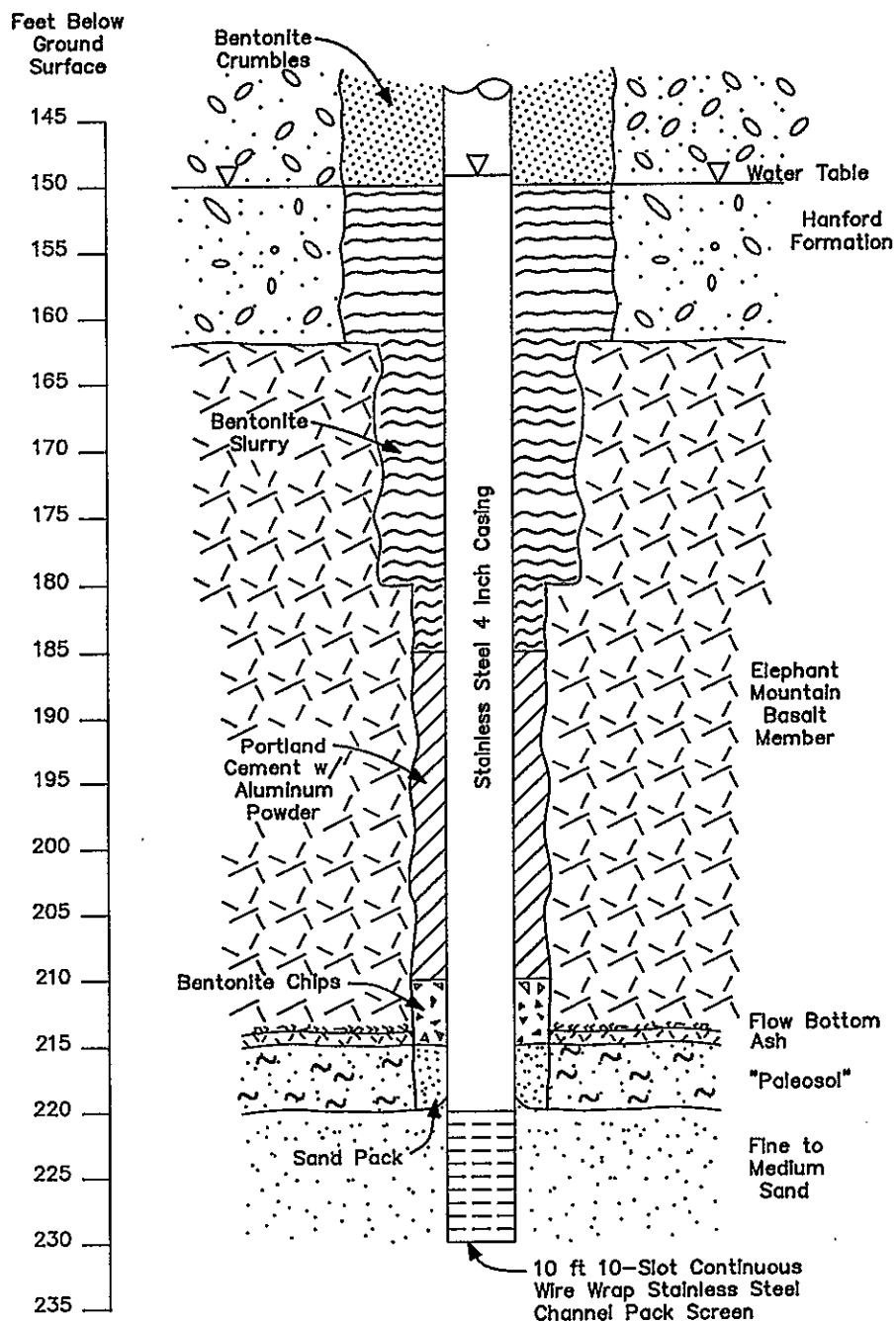
As a result, it is expedient to identify the first water producing zone and construct the well so as to monitor the uppermost 5-15 feet of that producing zone. This change will permit the monitoring of the proper hydrogeologic zone. As a result, this change will not adversely impact the ability of wells installed in the Rattlesnake Ridge Interbed to meet the data objectives stipulated in the workplan.

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## WELL COMPLETION STRATEGY FOR BOREHOLE 699-49-57B

Hydrogeologic information obtained upon penetration of the Rattlesnake Ridge Interbed in borehole 699-49-57B indicates that the basalt flow bottom is thin (one to two feet thick) and produces little (if any) water. Upon penetration of the flow bottom, a split tube sampler was driven for TOC samples and lithologic description. The lithology encountered immediately below the basalt included a 12 inch thick "baked" ash unit and a 2-3 feet thick indurated paleosol. Neither the ash or paleosol units produced noticeable volumes of water while drilling. Below the paleosol, a fine to medium grained unconsolidated sand body was penetrated. The borehole was extended approximately 10 feet into the sand body. While drilling the sand body, water levels in the borehole increased to approximately the same level as the static water level in the unconfined aquifer, indicating that a significant water producing zone had been penetrated.

The well screen for 699-49-57B will be installed in the fine to medium grained sand body below the paleosol unit. This sand body represents the first significant water producing zone in the Rattlesnake Ridge Interbed encountered in this borehole. The attached figure depicts the idealized completion strategy for borehole 699-49-57B.



GEOSCI\101590-B

Idealized Completion of Well 699-49-57B